

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau(43) International Publication Date
22 February 2001 (22.02.2001)

PCT

(10) International Publication Number
WO 01/12491 A1(51) International Patent Classification⁷:

B62B 1/26

(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

(21) International Application Number:

PCT/GB00/03195

(22) International Filing Date:

18 August 2000 (18.08.2000)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

9919420.1 18 August 1999 (18.08.1999) GB

(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

(71) Applicant and

(72) Inventor: GEE, Graham [GB/GB]; 112 Corporation Street, Chorley, Lancashire PR6 0DN (GB).

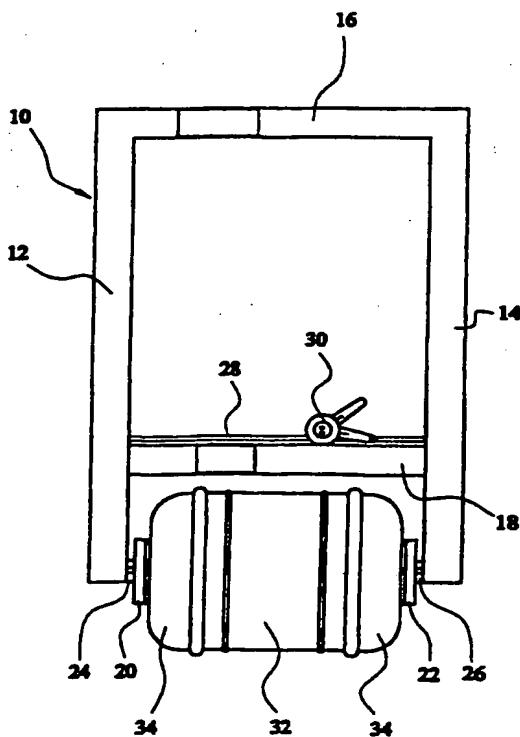
(74) Agents: BRIERLEY, Anthony, Paul et al.; Appleyard Lees, 15 Clare Road, Halifax HX1 2HY (GB).

Published:

— With international search report.

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: CONTAINER MOVING APPARATUS



(57) Abstract: Containers containing fluid can be difficult to move especially in a controlled manner. Container moving apparatus (10) comprises a frame comprising two side members (12, 14) which are connected at an upper location by a handle section (16). Each side member has a clamping member (20, 22) secured at a lower position. The clamping members (20, 22) are secured to the side members (12, 14) through roller bearings (24, 26) in order for the clamping members (20, 22) to rotate relative to the side members (12, 14). The clamping members (20, 22) are arranged to clamp a container (32) therebetween in order for the container (32) to be rolled along a surface under the control of the handle section (10). The clamping members (20, 22) can be moved apart in order to release the container (32) and move towards each other in order to clamp the container (32).

CONTAINER MOVING APPARATUSField of the Invention

5 The invention relates to container moving apparatus and especially, but not limited to, apparatus for moving containers containing fluids, for example beer barrels or gas cylinders.

10 Background to the Invention

Containers containing fluids, for example beer barrels, gas cylinders, chemical drums, oil drums and fluid filled plastic containers are heavy and difficult to move. This 15 is especially apparent for containers having a volume of 5 gallons and upwards. The barrels can simply be pushed and rolled along the ground. However, with these methods the barrels are generally out of control if being pushed down a decline and are therefore dangerous. In addition, the 20 barrels are difficult to push up an incline and are also at risk of rolling back down the incline. Furthermore, if the barrels are manually manoeuvred then this requires the person to bend over in order to push the barrels. This puts the person at risk from injury and puts a high strain 25 on the back of the individual. Any resultant back pain can result in time off work for the individual, and, therefore, puts a burden on the employer.

A prior art method comprises a trolley having a 30 support section located between two wheels and a handle. The barrel is placed on the support section and the support section is tilted using the handle and the barrel can then be manoeuvred. One problem with such trolleys is

that the wheels are generally small which makes the trolley difficult to manoeuvre upstairs or downstairs. In addition, the barrel is at risk of falling off the support section when manoeuvring down a decline or downstairs.

5 With such trolleys the barrel travels in front of the individual. At sharp corners there is a risk of a collision since the individual cannot see around the corner prior to the barrel being pushed in front of the corner. The only solution is for the individual to stop
10 pushing the trolley and firstly check for hazards around the corner.

It is an aim of the present invention to overcome at least one problem associated with the prior art whether
15 referred to herein or otherwise.

Summary of the Invention

According to a first aspect of the present invention
20 there is provided apparatus for moving a container, the apparatus comprising a frame, the frame comprising a handle section, the frame being arrangeable, in use, to be secured to the container such that the container can rotate relative to the frame and the container can be
25 rolled along a surface, movement of the container being controlled by the handle section.

According to a second aspect of the present invention
there is provided an assembly comprising apparatus for
30 moving a container in accordance with the first aspect of the present invention secured to a container.

Preferably the cross section of the container is substantially circular. The container may be substantially cylindrical. The container may be a fluid filled container. The container may be a barrel and may 5 be a beer barrel. The container may be a cylinder and may be a gas cylinder. The container may be a chemical drum or an oil drum. The container may be a plastics container. The container may be arranged to contain greater than 3 gallons and preferably greater than 5 10 gallons of a fluid. The container may be arranged to contain substantially 9 or 10 or 11 or 18 or 22 gallons of a fluid.

The frame may be arranged, in use, to be secured to 15 the container such that the container can rotate relative to the frame and the container can be rolled along a surface or the ground preferably by manually pulling or pushing the frame.

20 Preferably the frame is arranged to clamp the container.

Preferably the frame has a first clamping member and a second clamping member. Preferably the first and second 25 clamping members can be moved towards each other between at least a first and second position. Preferably the clamping members are locked in the first position. Preferably the clamping members are locked in the second position. In the first position the clamping members may 30 be spaced apart by a distance greater than the length of the container. In the second position the clamping members may be spaced apart by a distance substantially

the same as the length of the container. Preferably the container is clamped in the second position.

The first and second clamping members may be plates.

5 The clamping members may have projections located thereon. Each clamping member may have a plurality of projections located thereon and preferably four or five projections located thereon. The projections on the first clamping member may project towards the projections on the second 10 clamping member. The projections on at least one of the clamping members may be radially spaced to enable a spear of a beer barrel to be located therebetween. The projections on one clamping member may be longer than the projections on the other clamping member. The projections 15 may be radially located on each clamping member. The projections may comprise a point at the end. The projections may be rounded or flat at the end. The projections may comprise a metal and may comprise hardened steel.

20

One or each clamping member may have a reinforcement plate spaced from the clamping member. Preferably the or each reinforcement plate reinforces the projections.

25 The clamping member may comprise conical members. The conical members may comprise a plastics material.

The clamping members may comprise material for improving the grip of the container. The material may comprise 30 rubber. The clamping member may comprise rubber discs or rubber annular members.

The frame may comprise a metal and preferably is substantially aluminium. The length of the frame may be adjustable. The width of the frame may be adjustable.

5 The frame may comprise first and second side members. The handle may be connected between the first and second side members. The first and second side members may be connected by a reinforcement member. The length of the reinforcement member may be adjustable. The distance
10 between the first and second side members may be adjustable. The first and second side members may support the first and second clamping members respectively. Preferably the first and second clamping members are rotatably connected to the first and second side members.
15 Preferably the first and second clamping members are secured to the first and second side members through a bearing and preferably through a rolling bearing which may be a three dimensional bearing.

20 Preferably the plates of the first and second clamping members can pivot relative to the side members.

Preferably adjustment means are located between the first and second side members. Preferably the means
25 adjusts the distance between the first and second side members. The means may comprise a flexible member which is secured between the first and second side members. Preferably the length of the flexible member may be adjusted. The flexible member may comprise a length of
30 webbing. The means may comprise a ratchet mechanism or a clamping mechanism.

The adjustment means may comprise a clamping mechanism.

5 The apparatus may have a brake mechanism. The brake mechanism may inhibit or prevent rotation of the container relative to the frame.

10 According to a third aspect of the present invention there is provided a method of moving a container, the method comprising the steps of fixing a frame to a container such that the container can rotate relative to the frame and moving the frame such that the container rotates relative to the frame and the container rolls along a surface.

15

The method may comprise pushing the frame. Preferably the method comprises pulling the frame. Preferably the method is a manual method of moving the container.

20 Preferably the method comprises clamping the container in the frame. Preferably the method comprises clamping the container between first and second clamping members. Preferably the method comprises clamping the container between projections on the first and second clamping members.

25 Preferably the method comprises clamping the ends of the container between the clamping members.

30 The method may comprise moving first and second clamping members between a first and second position to clamp the container. The method may comprise operating a ratchet mechanism to move first and second clamping

members. The method may comprise operating a clamp to move first and second clamping members.

Brief Description of the Drawings

5

The present invention will now be described, by way of example only, with reference to the drawings that follow, in which;

10 Figure 1 is a front view of one embodiment of beer barrel moving apparatus according to the invention;

Figure 2 is a side view of the beer barrel moving apparatus;

15

Figure 3 is a front view of the beer barrel moving apparatus attached to a beer barrel;

20 Figure 4 is a side view of the beer barrel moving apparatus affixed to a beer barrel;

Figure 5 is a front view of a clamping plate;

25 Figure 6 is a front view of an annular reinforcement plate;

Figure 7 is a side view of a clamping member;

Figure 8 is a side view of a clamp;

30

Figure 9 is a front view of a further embodiment of beer barrel moving apparatus; and

Figure 10 is a front view of a further embodiment of a clamping mechanism for use with beer barrel moving apparatus.

5 Description of the Preferred Embodiments

As shown in Figures 1 and 2, beer barrel moving apparatus 10 has a frame comprising two side members 12, 14 which are connected at an upper location by a handle section 16. The side members 12, 14 are connected at a lower position by a reinforcement member 18.

The side members 12 and 14, handle section 16 and reinforcement member 18 all comprise tubular or box sections of aluminium. The handle section 16 and the reinforcement member 18 are both telescopic. The handle section 16 has two outer tube sections 11, 13 each being connected to one side member 12, 14 respectively. An inner tube section 15 having a smaller cross section is located inside the two outer sections 11, 13. Similarly, the reinforcement member 18 has two outer tube sections 17, 19 each being connected to one side member 12, 14 respectively. An inner tube section 21 having a smaller cross section is located inside the two outer sections 17, 19. This arrangement enables the length of the handle section 16 and the length of reinforcement member 18 to be adjusted by sliding the outer sections over the inner sections.

30 Each side member has a clamping member 20, 22 secured at a lower position. The clamping members 20, 22 are secured to the side members 12, 14 through roller bearings

24, 26. The bearings 24, 26 enable the clamping members 20, 22 to rotate relative to the side members 12, 14.

The side members 12, 14 are also connected by a 5 flexible member 28. The flexible member 28 may be a section of webbing. The webbing 28 has a ratchet mechanism 30 located thereon.

The ratchet mechanism 30 enables the length of the 10 webbing to be adjusted. By using the ratchet mechanism 30 to decrease the length of the webbing 28, the side members 12, 14 and the clamping members 20, 22 are moved towards each other and the lengths of the handle section 16 and the reinforcement member 18 are shortened.

15

As shown in Figures 3 and 4 a beer barrel 32 can be clamped between the two clamping members 20, 22. Once the beer barrel 32 is clamped by the clamping members 20, 22, the beer barrel 32 is able to rotate relative to the frame 20 10 as a result of the roller bearings 24, 26.

The barrel 32 is secured to the frame 10 by firstly spacing the clamping members 20, 22 by a distance greater than the length of the barrel 32. The clamping members 25 are then positioned within the end annular flanges 34 of the barrel. The ratchet mechanism 30 is operated to reduce the length of the webbing 28. The axes of the clamping members 20, 22 are aligned with the central axis of the barrel 32. This subsequently results in a smooth 30 rolling action of the barrel relative to the frame 10.

The reduction of the length of the webbing 28 urges the side members 12, 14 towards each other. This causes

the handle section 16 and reinforcement member 18 to subsequently shorten. In addition, the clamping members 20, 22 are urged towards each other until they abut the ends of the barrel 32. The ratchet mechanism 30 is 5 operated further to attempt to shorten the webbing 28 which causes an increase in the pressure of the clamping members 20, 22 on the ends of the barrel. Once the clamping force of the clamping members 20, 22 on the ends of the barrel 32 holds the barrel 32 firmly the operation 10 of the ratchet mechanism can be ceased.

A person can grasp the handle section 16 and move the frame to be at an angle to the ground and the barrel 32. Once at an angle the person can push or pull the frame 15 which thereby causes the barrel 32 to roll along the ground and can then be easily manoeuvred in a controlled manner. The person can move the barrel 32 whilst in an upright stance which thereby reduces any strain placed on their back.

20

The diameter of a beer barrel 32 is greater than the height of conventional steps. In addition, the diameter of a beer barrel 32 may be greater than twice the height of a step. Therefore, if the barrel 32 needs to be moved 25 up some stairs then the person simply pulls the frame and the barrel to the bottom of the first step. Once at the bottom of the first step the person can pull on the frame 10 to move the barrel 32 up the steps. This is not possible with prior art methods using a trolley with small 30 wheels. In addition, the barrel 32 is always under control and cannot become separated from the frame 10.

If the barrel 32 has not been properly clamped in the frame 10 then the barrel 32 may work loose. Beer barrels have annular flanges 34 located at each end of the barrel. The annular flanges 34 project outwardly from the periphery of the barrel from each end. Therefore, if the clamping members 20, 22 work loose from the surface of the ends of the barrel 32 then they will abut an inner part of the annular flanges 34. Accordingly, the beer barrel 32 does not become separated from the frame 10. This enables the barrel 32 to be re-clamped and the barrel 32 will not have been out of control.

Once at the destination, the barrel 32 is removed from the frame 10. In order to release the barrel 32 from the frame 10 the ratchet mechanism 30 is operated to release its grip on the webbing 28. This enables the clamping members 20, 22 to be moved away from each other until the clamping members 20, 22 are spaced apart by a distance greater than the length of the barrel 32. The frame 10 can then be removed from the barrel 32 and the barrel can be manually handled to an upright position if required.

The clamping members are shown in more detail in Figures 5, 6 and 7. Each clamping member has a base plate 40. The base plate 40 is circular shape although a different shape can be used. Each clamping member has a shaft (not shown) affixed centrally on one side of the base plate. Each shaft projects from the base plate 40 and through a roller bearing located on the side members. This enables the base plate 40 and hence the clamping members 20, 22 to rotate relative to the side member 12, 14.

On the other side of the base plate 40 there are projections 42 secured thereto. There may be four or five such projections 42 which are radially positioned on the base plate 40. The projections 42 are lengths of hardened 5 steel and may be welded to the base plate 40. Alternatively, the projections 42 may project through the base plate 40 and be secured by a bolt. However, the welded attachment is preferable since the other side of the base plate will not have any projecting portions and 10 this may reduce the overall width of the frame. It is preferable to keep the overall width of the frame as short as possible in order for the frame to be able to manoeuvre beer barrels through narrow gaps.

15 The projections have a point at their outermost end. The point may provide a small dimple in the surface of the ends of the barrel 32 when clamped. The small dimple will give an improved grip of the barrel by the frame. However, the projections may be rounded or flat at the 20 end. The shape of the ends of the projections may depend upon the container and/or the material of the container.

Each clamping member has a reinforcement plate 44 that is an annular plate. The annular plate 44 strengthens the 25 arrangement of the projections 42. The annular plate 44 has five apertures 45 located radially to enable the projections 42 to pass therethrough. The annular plate 44 has a central aperture. This central aperture and the radial arrangement of the projection 42 enables a spear of 30 a beer barrel to be located therein.

The projections on one of the clamping members may be longer than the projections on the other clamping member.

This provides a greater distance from the base plate to the surface of the barrel 32 and, enables the clamping member to easily accommodate the spear of a beer barrel.

5 In order to improve the grip on the beer barrel 32 a layer of a material may be located between the projections and the surface of the beer barrel 32. This may be a layer of a plastics material and may be a rubber material. The shapes of the ends of the projections may be rounded
10 or flat to improve the grip on the container.

A clamp mechanism 50 may be used as an alternative to the ratchet mechanism 30, as shown in Figure 8. The clamp 50 has an extending member 52 which is secured to the
15 webbing extending from both side members. The extending member is able to move about a pivot 54 which causes a decrease in the overall length of the webbing. The section of webbing 56 attached to the first side member moves towards the section of webbing 58 attached to the
20 second side member. This causes the first and second clamping members to move towards each other to clamp the container. The clamp can be released to increase the length of the webbing for the container to be removed.

25 A further embodiment of beer barrel moving apparatus
10 is shown in Figure 9 and Figure 10. The apparatus 10 comprises side members 12 and 14, a handle section 16 and a reinforcement member 18. The reinforcement member 16 is
20 adjustable in length in order to move the side members 12 and 14 towards and away from each other in order to clamp
30 and release the beer barrel.

The reinforcement member 16 comprises a shaft 70 having two open ends at the longitudinal ends thereof. A first extending member 74 projects from the first side member 12 and is slidably engaged within the shaft 70.

5 Similarly a second extending member 76 projects from the second side member 14 and is slidably engaged in the other end of the shaft 70. The second extending member 76 comprises a flange 78 about its periphery. A spring 80 locates between the flange 78 and the periphery of the

10 shaft 70 in order to urge the shaft 70 away from the second side member 16.

A second flange member 82 locates around the periphery of the first extending member 74. The second flange member 82 is mounted on a carriage 83 which is connected to the shaft 70. The second flange member 82 acts as a retaining means to retain the first extending member 74 at a fixed position relative to the shaft 70. In order to extend or retract the first extending member 74 relative to the shaft 70 a release level 85 can be moved along its longitudinal axis and held in position in order for the first extending member 74 to slidably move relative to the shaft 70. The second flange member 82 is not integral with the first extending member 74 and can be slidably moved along the longitudinal length of the first extending member 74. This retaining means comprises a plate 84 having an aperture defined therein. The first extending member 74 is able to slide through this aperture when the plate is substantially perpendicular to the first extending member 74. However, the first extending member 74 is retained in position relative to the plate 84 and hence the shaft 70 when the plate is at an angle. A spring 87 coupled with an abutment member 89 urge the

plate 84 in to an angled configuration when the release lever is at rest. However, when the release lever is pulled along its longitudinal axis towards the second side member 16 the plate 84 can be positioned to be substantially perpendicular relative to the first extending member 74 and the first extending member can be extended from or retracted into the shaft 70. This arrangement enables barrels of different lengths to be secured with the beer barrel moving apparatus 10.

10

In order to clamp a beer barrel in the beer barrel moving apparatus 10 firstly the second flange member 82 is moved along the first extending member 74 in order for the clamping members 90, 92 to lightly grip the ends of the beer barrel. A lever handle 86 which is pivotally connected to the second extending member through a pivot 88 is rotated around the pivot from an open to a closed position. Figure 9 and Figure 10 show the lever handle in a closed position. The lever handle may comprise a grip portion 87 to aid the user. As the lever handle 86 is pivoted a lever mechanism comprising a lever member 90 moves the shaft 70 along the second extending member 76 towards the second side member 14. As the shaft 70 moves towards the second side member the first extending member 74 and also the first side member 12 are also moved towards the second side member 12, 14. Therefore, the first and second side members 12, 14 and, hence the first and second clamping members 90, 92 are moved relative towards each other. In order to release the beer barrel, the lever handle 86 is rotated in the opposite direction in order for the side members 12, 14 to move away from each other as encouraged by the spring 80.

The clamp members 90, 92 mounted on the side members 12, 14 may comprise resilient members. The resilient members may provide a good grip of the ends of the barrel. The clamp members 90, 92 may comprise rubber discs or 5 rubber annulars which are mounted on cones and preferably plastic cones. In addition, the clamp members 90, 92 may be able to pivot relative to the side members in order for the plane of the clamp members to be in a different plane, for example the plane of the clamp members may not be 10 exactly vertical. For example, the clamp members may be mounted to the side members by 3 dimensional bearings.

Finally, the beer barrel moving apparatus 10 may comprise a brake mechanism. Each clamp member 90, 92 may 15 have a brake shoe 94, 96 associated therewith. Each brake shoe 94, 96 is operated independently by a brake lever 98, 100 mounted on the handle 16. On pulling the brake levers 98, 100 towards the handle 16 the brake shoes 94, 96 are caused to move towards the outer periphery of the 20 clamp members 90, 92 and, eventually, abut the clamp members 90, 92 to inhibit further rotation. The brake mechanism operates using conventional cables. Alternatively, the beer barrel moving apparatus may comprise a single lever operating two brake shoes or a 25 single lever operating a single brake shoe associates with only one clamp member.

The apparatus 10 may be adapted to move other containers especially fluid filled containers, for example 30 gas cylinders, oil drums, chemical drums or plastics containers. The containers may be arranged to contain a volume of a fluid greater than 5 gallons and may be

arranged to contain a volume of substantially 9 or 10 or 11 or 18 or 22 gallons of a fluid.

5 The reader's attention is directed to all papers and documents which are filed concurrently with or previous to this specification in connection with this application and which are open to public inspection with this specification, and the contents of all such papers and documents are incorporated herein by reference.

10

All of the features disclosed in this specification (including any accompanying claims, abstract and drawings), and/or all of the steps of any method or process so disclosed, may be combined in any combination, 15 except combinations where at least some of such features and/or steps are mutually exclusive.

20 Each feature disclosed in this specification (including any accompanying claims, abstract and drawings), may be replaced by alternative features serving the same, equivalent or similar purpose, unless expressly stated otherwise. Thus, unless expressly stated otherwise, each feature disclosed is one example only of a generic series of equivalent or similar features.

25

The invention is not restricted to the details of the foregoing embodiment(s). The invention extend to any novel one, or any novel combination, of the features disclosed in this specification (including any accompanying claims, abstract and drawings), or to any novel one, or any novel combination, of the steps of any method or process so disclosed.

Claims

1. Apparatus (10) for moving a container (32), the apparatus (10) comprising a frame, the frame comprising a handle section (16), the frame being arrangable, in use, to be secured to the container (32) such that the container (32) can rotate relative to the frame and the container (32) can be rolled along a surface, movement of the container (32) being controlled by the handle section (16).
10
2. Apparatus according to claim 1 wherein the container (32) is substantially cylindrical.
- 15 3. Apparatus according to claim 1 or claim 2 in which the container (32) is a fluid filled container.
- 20 4. Apparatus according to any preceding claim in which the frame is arranged, in use, to be secured to the container (32) such that the container (32) can rotate relative to the frame and the container (32) can be rolled along a surface or the ground.
- 25 5. Apparatus according to claim 4 in which the container (32) is rolled along a surface or the ground by manually pulling or pushing the frame.
- 30 6. Apparatus according to any preceding claim in which the frame is arranged to clamp the container (32).
7. Apparatus according to any preceding claim in which the frame has a first clamping member (20) and a second clamping member (22).

8. Apparatus according to claim 7 in which the first and second clamping members (20, 22) can be moved towards each other between at least a first and second position.

5

9. Apparatus according to claim 8 in which in the first position the clamping members (20, 22) are spaced apart by a distance greater than the length of the container (32).

10 10. Apparatus according to claim 8 or claim 9 in which in the second position the clamping members (20, 22) are spaced apart by distance substantially the same as the length of the container (32).

15 11. Apparatus according to any of claims 8 to 10 in which the container (32) is clamped in the second position.

12. Apparatus according to any preceding claim in which the length of the frame is adjustable.

20

13. Apparatus according to any preceding claim in which the width of the frame is adjustable.

14. Apparatus according to any preceding claim in which 25 the frame comprises first and second side members (12, 14).

15. Apparatus according to claim 14 in which the first and second side members (12, 14) are connected by a 30 reinforcement member (18).

16. Apparatus according to claim 15 in which the length of the reinforcement member (18) is adjustable.

17. Apparatus according to any of claims 14 to 16 in which the first and second clamping members (20, 22) are rotatably connected to the first and second side members (12, 14).

18. Apparatus according to claim 17 in which the first and second clamping members (20, 22) are secured to the first and second side members (12, 14) through a bearing (24, 10 26).

19. Apparatus according to any of claims 14 to 18 in which adjustment means are located between the first and second side members (12, 14).

15 20. An assembly comprising apparatus (10) for moving a container (32) in accordance with any preceding claim in which the apparatus (10) is secured to a container (32).

20 21. A method of moving a container (32), the method comprising the steps of fixing a frame to a container (32) such that the container (32) can rotate relative to the frame and of moving the frame such that the container (32) rotates relative to the frame and the container rolls 25 along a surface.

22. A method according to claim 21 wherein the method comprises pushing the frame.

30 23. A method according to claim 21 or claim 22 wherein the method comprises pulling the frame.

24. A method according to any of claims 21 to 23 in which the method is a manual method of moving the container (32).

5 25. A method according to any of claims 21 to 24 in which the method comprises clamping the container (32) in the frame.

10 26. A method according to claim 25 in which the method comprises clamping the container (32) between first and second clamping members (20, 22).

15 27. A method according to claim 26 in which the method comprises clamping the ends of the container (10) between the clamping members (20, 22).

20 28. A method according to claim 27 in which the method comprises moving first and second clamping members (20, 22) between a first and second position to clamp the container (32).

25 29. A method according to any of claims 21 to 28 in which the method comprises operating a ratchet mechanism (30) to move first and second clamping members (20, 22).

30. A method according to any of claims 26 to 29 in which the method comprises operating a clamp to move first and second clamping members (20, 22).

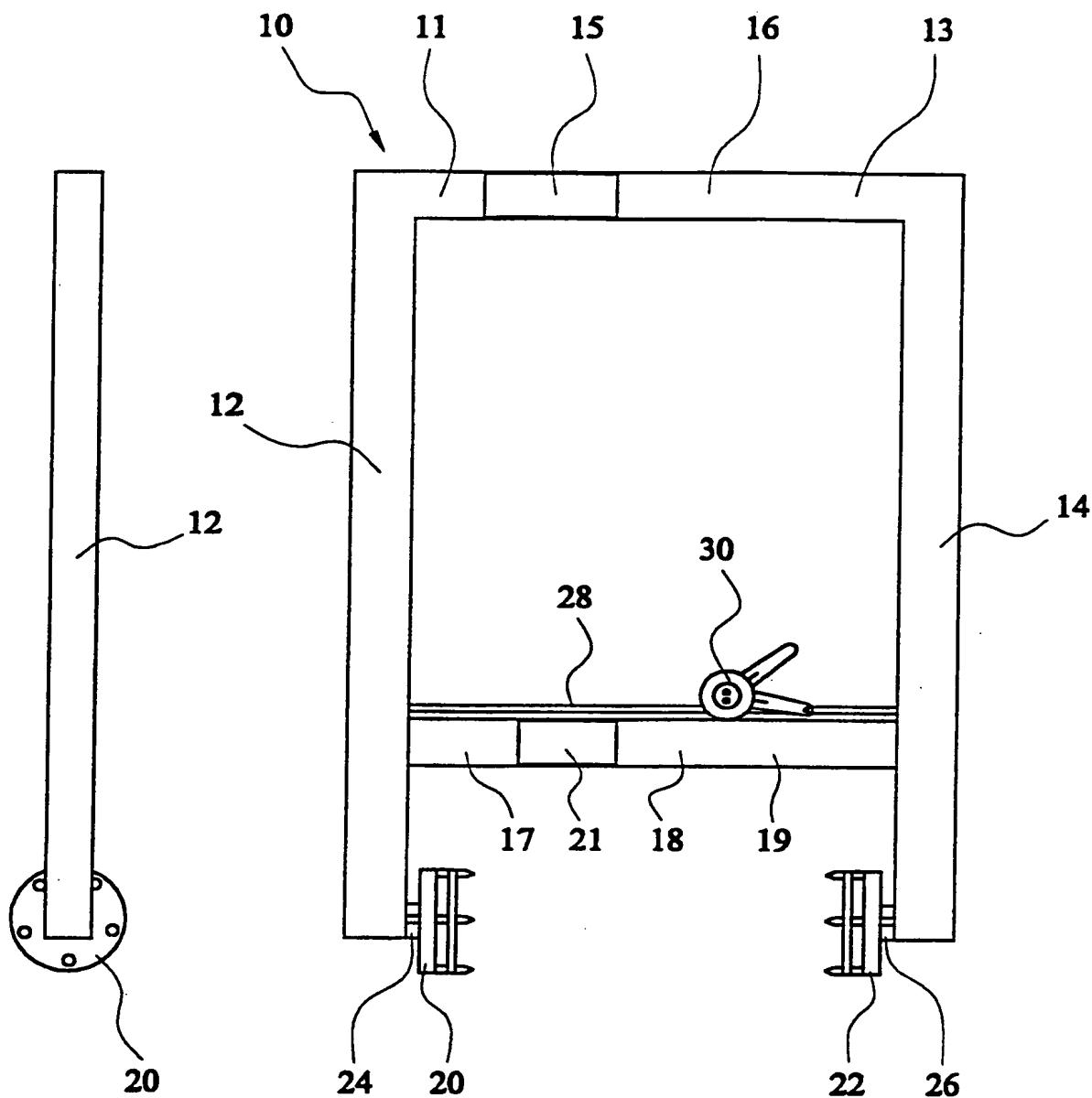


FIG. 2

FIG. 1

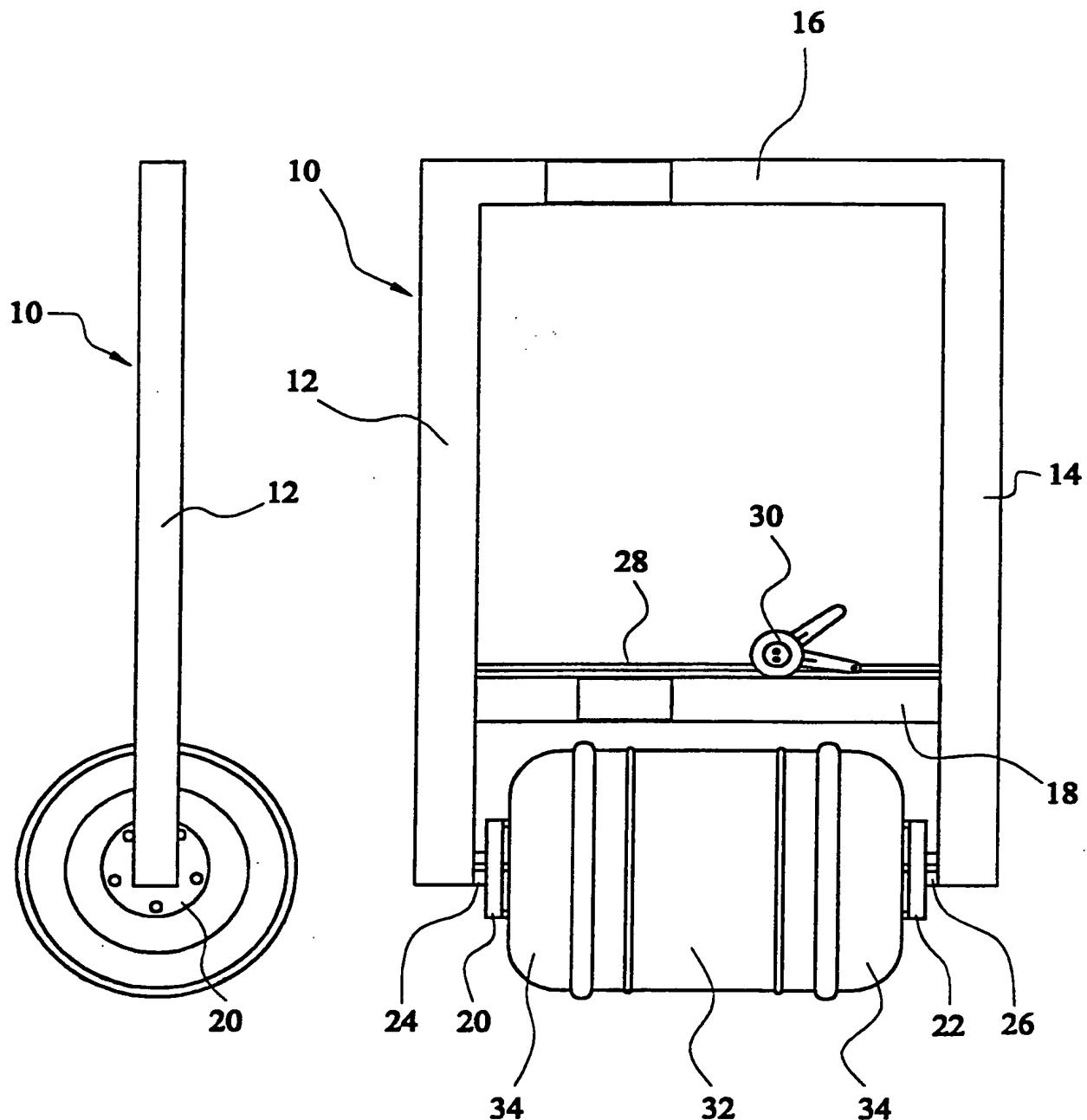


FIG. 4

FIG. 3

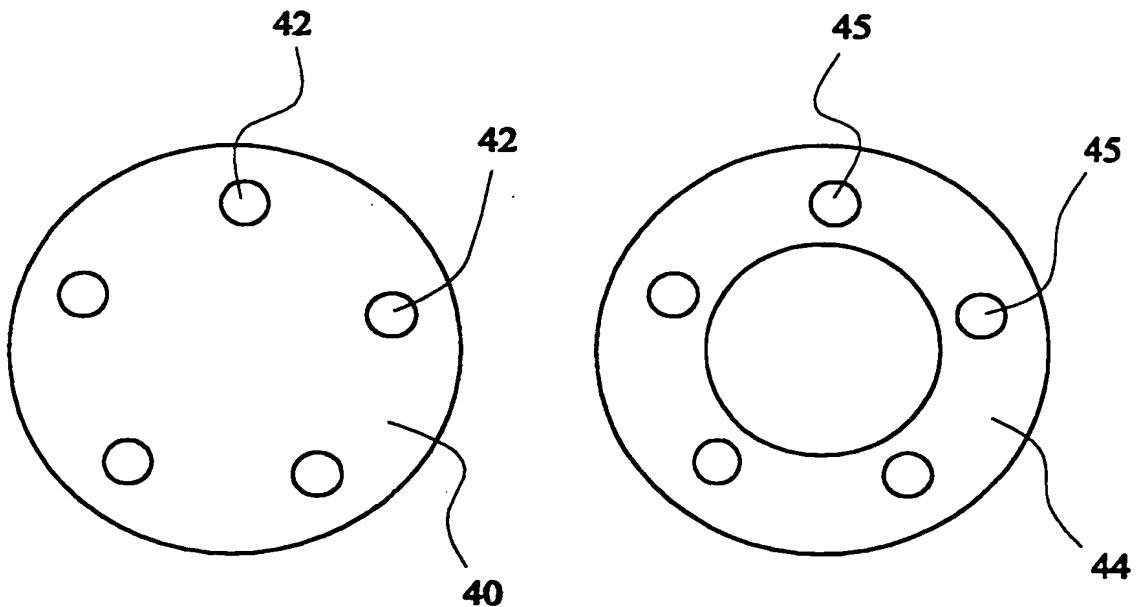


FIG. 5

FIG. 6

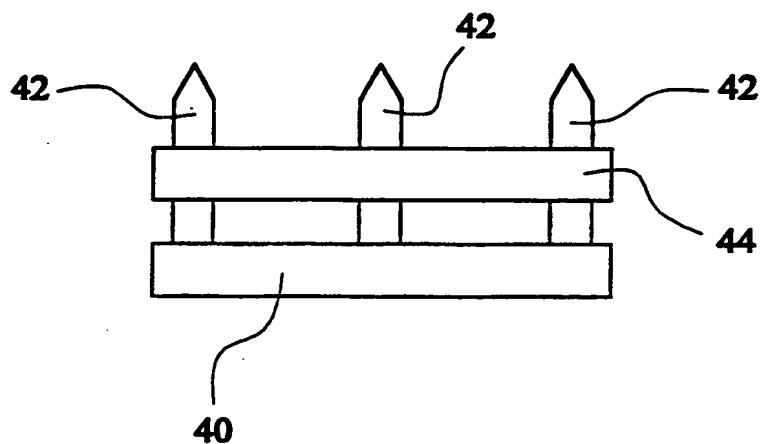


FIG. 7

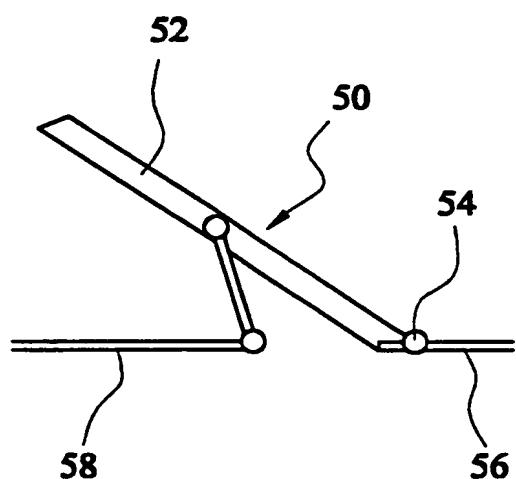
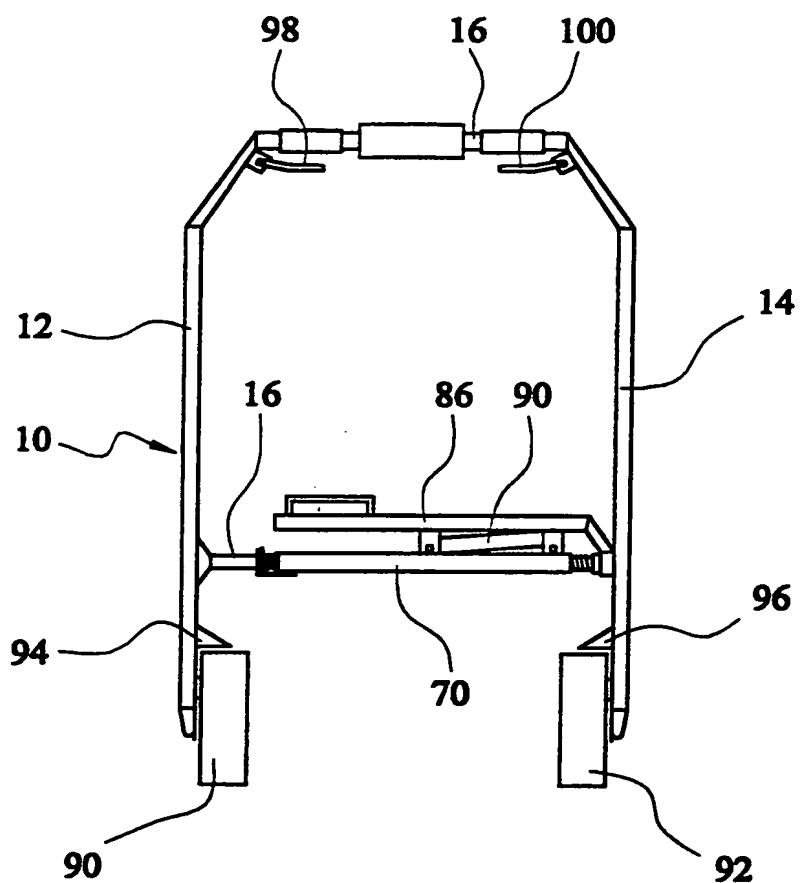
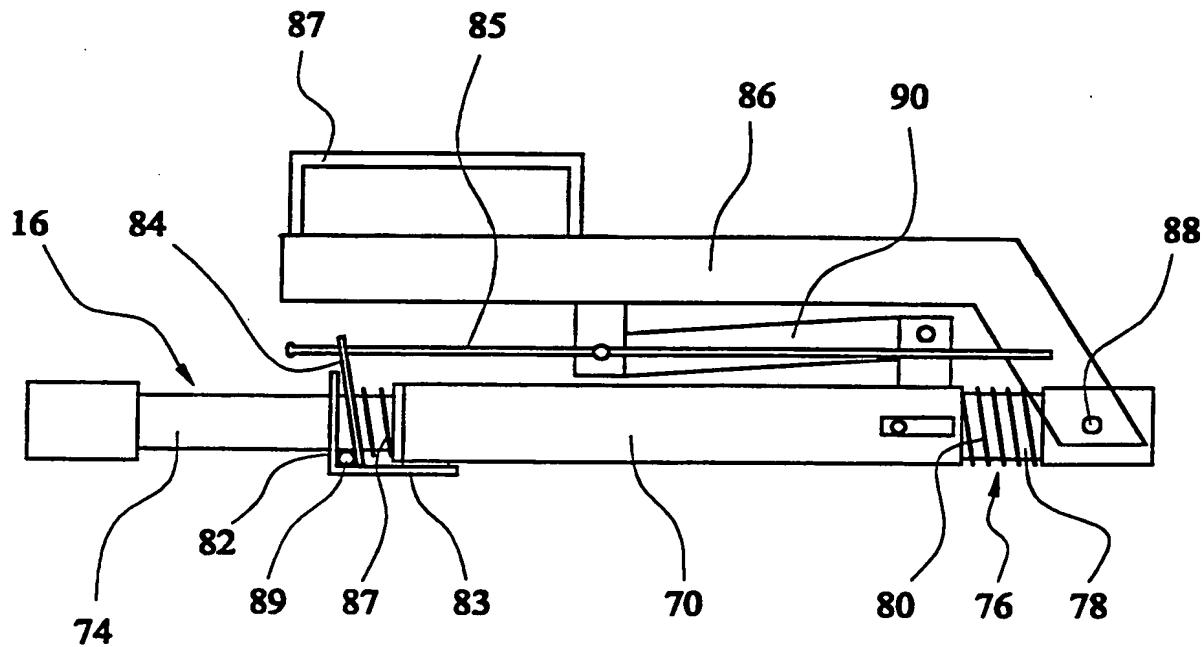


FIG. 8

-4/4-

FIG. 9FIG. 10

INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 00/03195

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 B62B1/26

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 B62B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 3 718 342 A (FREED R) 27 February 1973 (1973-02-27) the whole document ---	1-7, 9, 10, 12-15, 17, 20-28
X	US 2 412 697 A (S. SOCHACZEWSKI) 17 December 1946 (1946-12-17) the whole document ---	1-7, 9, 10, 12-15, 17, 20-28
A	FR 995 125 A (M. RAOUL ROBERT) 30 November 1951 (1951-11-30) the whole document -----	1-30

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

& document member of the same patent family

Date of the actual completion of the international search

16 November 2000

Date of mailing of the international search report

29/11/2000

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl.
Fax: (+31-70) 340-3016

Authorized officer

Wochinz, R

INTERNATIONAL SEARCH REPORT

Information on patent family members

Int. Appl. No.

PCT/GB 00/03195

Patent document cited in search report	Publication date	Patent family member(s)		Publication date
US 3718342	A	27-02-1973		NONE
US 2412697	A	17-12-1946	GB	567121 A
FR 995125	A	30-11-1951		NONE

INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 00/03195

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 B62B1/26

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 B62B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 3 718 342 A (FREED R) 27 February 1973 (1973-02-27) the whole document	1-7, 9, 10, 12-15, 17, 20-28
X	US 2 412 697 A (S. SOCHACZEWSKI) 17 December 1946 (1946-12-17) the whole document	1-7, 9, 10, 12-15, 17, 20-28
A	FR 995 125 A (M. RAOUL ROBERT) 30 November 1951 (1951-11-30) the whole document	1-30

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the International filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the International filing date but later than the priority date claimed

- *T* later document published after the International filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *&* document member of the same patent family

Date of the actual completion of the international search

16 November 2000

Date of mailing of the international search report

29/11/2000

Name and mailing address of the ISA
European Patent Office, P.B. 5818 Patenttaan 2
NL - 2280 HV Rijswijk
Tel: (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Wochinz, R

INTERNATIONAL SEARCH REPORT

Information on patent family members

Int'l. Appl. No.

PCT/GB 00/03195

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 3718342	A 27-02-1973	NONE	
US 2412697	A 17-12-1946	GB 567121 A	
FR 995125	A 30-11-1951	NONE	

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference NAJ/JRT/S600	FOR FURTHER ACTION		See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. PCT/GB00/03195	International filing date (day/month/year) 18/08/2000	Priority date (day/month/year) 18/08/1999	
International Patent Classification (IPC) or national classification and IPC B62B1/26			
<p>Applicant GEE, Graham</p>			

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 8 sheets, including this cover sheet.

This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:

- I Basis of the report
- II Priority
- III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV Lack of unity of invention
- V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI Certain documents cited
- VII Certain defects in the international application
- VIII Certain observations on the international application

Date of submission of the demand 08/03/2001	Date of completion of this report 31.08.2001
Name and mailing address of the international preliminary examining authority: European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized officer Wochinz, R Telephone No. +49 89 2399 2129



**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/GB00/03195

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, pages:

1-17 as originally filed

Claims, No.:

1-30 as originally filed

Drawings, sheets:

1/4-4/4 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- the language of publication of the international application (under Rule 48.3(b)).
- the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- contained in the international application in written form.
- filed together with the international application in computer readable form.
- furnished subsequently to this Authority in written form.
- furnished subsequently to this Authority in computer readable form.
- The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- the description, pages:
- the claims, Nos.:

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/GB00/03195

the drawings, sheets:

5. This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):
(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been examined in respect of:

the entire international application.

claims Nos. 2, 3, 9, 10.

because:

the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (*specify*):

the description, claims or drawings (*indicate particular elements below*) or said claims Nos. 2, 3, 9, 10 are so unclear that no meaningful opinion could be formed (*specify*):
see separate sheet

the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.

no international search report has been established for the said claims Nos. .

2. A meaningful international preliminary examination cannot be carried out due to the failure of the nucleotide and/or amino acid sequence listing to comply with the standard provided for in Annex C of the Administrative Instructions:

the written form has not been furnished or does not comply with the standard.

the computer readable form has not been furnished or does not comply with the standard.

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N) Yes: Claims 8, 11-13, 16, 18, 29, 30

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/GB00/03195

	No: Claims	1, 4-7, 14, 15, 17, 19-28
Inventive step (IS)	Yes: Claims	8, 11, 16, 18, 29, 30
	No: Claims	1, 4-7, 12-15, 17, 19-28
Industrial applicability (IA)	Yes: Claims	1, 4-8, 11-30
	No: Claims	

**2. Citations and explanations
see separate sheet**

VII. Certain defects in the international application

The following defects in the form or contents of the international application have been noted:
see separate sheet

VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:
see separate sheet

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/GB00/03195

Reference is made to the following documents:

D1: US-A-3,718,342
D2: US-A-2,412,697

SECTION III:

1. No examination of **claims 2, 3, 9 and 10** with respect to Articles 33(1)-(4) PCT could be carried out for the clarity reasons as mentioned in SECTION VIII below.

SECTION V:

1. Concerning claim 1:

1.1 As far as claim 1 can be understood (see Section VIII, Point 1.), document D1 (see especially Figure 1) is considered as being the closest prior art to the subject-matter of claim 1 and shows an

Apparatus for moving a container (12, 19, etc.), the apparatus comprising a frame (30), the frame comprising a handle section (32), the frame being arrangable, in use, to be secured to the container such that the container can rotate relative to the frame and the container can be rolled along a surface, movement of the container being controllable (see Section VIII, Point 1.) by the handle section (32).

In this connection it should be borne in mind, that the apparatus according to claim 1 does not include the container (see Section VIII, Point 1., first paragraph). It does therefore do not make any difference if the apparatus as shown is moving a container or a kind of cage as shown in D1. The apparatus is suitable to move a container.

1.2 The subject-matter of **claim 1** is therefore not new (Article 33(2) PCT).

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/GB00/03195

1.3 Additionally, also when starting from document D2 the subject-matter of **claim 1** would not be new (Article 33(2) PCT).

2. Concerning claim 21:

2.1 Document D1 (see especially Figure 1) is considered as being the closest prior art to the subject-matter of claim 21 and shows

A method of moving a container, the method comprising the steps of fixing a frame (30) to a container (12, 19; etc.) such that the container can rotate relative to the frame and of moving the frame such that the container rotates relative to the frame and the container rolls along a surface.

In this connection it should be borne in mind, that the word "container" does not mean that the container has to be closed. The "cage" (12, 19, etc) of D1 can therefore also be regarded as being a container of open construction.

2.2 The subject-matter of **claim 21** is therefore not new (Article 33(2) PCT).

2.3 Additionally, also when starting from document D2 the subject-matter of **claim 21** would not be new (Article 33(2) PCT).

3. Concerning the dependent claims:

3.1 D1 also shows an apparatus according to the additional features of claims 4, 5, 6, 7 (clamping members 17), 14, 15 (reinforcement member 32), 17, 19 (adjustment by flexibility of part 32) and 20.

3.2 D1 also shows a method according to the additional features of claims 22, 23, 24, 25 (clamping between parts 17), 26, 27 and 28 (many positions of pins 17 are possible).

3.3 The subject-matter of **claims 4-7, 14, 15, 17, 19, 20 and 22-28** is therefore not new (Article 33(2) PCT).

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/GB00/03195

- 3.4 In claims 12 and 13 a slight constructional change in the apparatus of claim 1 is defined which comes within the scope of the customary practice followed by persons skilled in the art, especially as the advantages thus achieved can readily be foreseen. Consequently, the subject-matter of **claims 12 and 13** lacks an inventive step (Article 33(3) PCT).
4. The industrial applicability is given for all claims (Article 33(4) PCT).

SECTION VII:

1. Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in the documents D1 and D2 is not mentioned in the description, nor are these documents identified therein.
2. Independent claims 1 and 21 are not in the two-part form in accordance with Rule 6.3(b) PCT, which in the present case would be appropriate, with those features known in combination from the prior art (D1) being placed in a preamble (Rule 6.3(b)(i) PCT) and with the remaining features being included in a characterising part (Rule 6.3(b)(ii) PCT).
- 3.1 The features of the "adjustment means" in claim 19 and of the "clamp" in claim 30 are not provided with reference signs placed in parentheses (Rule 6.2(b) PCT).
- 3.2 The reference sign (10) for the container in claim 27 is not in accordance with the rest of the description which gives this part the reference sign (32) - Rule 6.2(b) PCT.

SECTION VIII:

1. Current claim 1 is directed to an "Apparatus for moving a container". The words "for moving a container" must be construed as meaning merely "Apparatus suitable for moving a container" (see also the PCT-Guidelines, III-4.8). The apparatus according to claim 1 does therefore not include the container.

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/GB00/03195

Nevertheless claim 1 and the dependent claims 2, 3, 4, 5, 6, 9, 10 and 11 define the invention by reference to the container which results in a lack of clarity of the claims (Article 6 PCT and the PCT-Guidelines, III-4.8a).

2. A lack of clarity (Article 6 PCT) arises for claim 20 for the following reason:

Claim 20 is directed to "An assembly comprising apparatus for moving a container...". According to claim 20 the "apparatus is secured to a container". Due to this wording it is not clear

- a) if this container is the same container as the container which is being moved by the apparatus, and
- b) if the assembly comprises also said container.

3. The content of other documents is "incorporated herein by reference" in the description (page 17, line 9). However, a patent specification should be self-contained, i.e. capable of being understood without reference to other documents. Additionally, this incorporation is not essential for carrying out the invention (Article 5 PCT and the PCT-Guidelines C-II, 4.17 and 4.18).

4. The imprecise statement in the description on page 17 (lines 11-32) implies that the subject-matter for which protection is sought may be different to that defined by the claims, thereby resulting in lack of clarity (Article 6 PCT) when used to interpret them (see also the PCT Guidelines, III-4.3a).

PATENT COOPERATION TREATY

PCT

REC'D 04 SEP 2001
WIPO PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference NAJ/JRT/S600	FOR FURTHER ACTION		See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. PCT/GB00/03195	International filing date (day/month/year) 18/08/2000	Priority date (day/month/year) 18/08/1999	
International Patent Classification (IPC) or national classification and IPC B62B1/26			
Applicant GEE, Graham			

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 8 sheets, including this cover sheet.

This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:

- I Basis of the report
- II Priority
- III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV Lack of unity of invention
- V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI Certain documents cited
- VII Certain defects in the international application
- VIII Certain observations on the international application

Date of submission of the demand 08/03/2001	Date of completion of this report 31.08.2001
Name and mailing address of the international preliminary examining authority: European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized officer Wochinz, R Telephone No. +49 89 2399 2129



INTERNATIONAL PRELIMINARY
EXAMINATION REPORT

International application No. PCT/GB00/03195

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):
Description, pages:

1-17 as originally filed

Claims, No.:

1-30 as originally filed

Drawings, sheets:

1/4-4/4 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- the language of publication of the international application (under Rule 48.3(b)).
- the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- contained in the international application in written form.
- filed together with the international application in computer readable form.
- furnished subsequently to this Authority in written form.
- furnished subsequently to this Authority in computer readable form.
- The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- the description, pages:
- the claims, Nos.:

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/GB00/03195

the drawings, sheets:

5. This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):
(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been examined in respect of:

the entire international application.

claims Nos. 2, 3, 9, 10.

because:

the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (*specify*):

the description, claims or drawings (*indicate particular elements below*) or said claims Nos. 2, 3, 9, 10 are so unclear that no meaningful opinion could be formed (*specify*):
see separate sheet

the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.

no international search report has been established for the said claims Nos. .

2. A meaningful international preliminary examination cannot be carried out due to the failure of the nucleotide and/or amino acid sequence listing to comply with the standard provided for in Annex C of the Administrative Instructions:

the written form has not been furnished or does not comply with the standard.

the computer readable form has not been furnished or does not comply with the standard.

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N) Yes: Claims 8, 11-13, 16, 18, 29, 30

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/GB00/03195

	No: Claims 1, 4-7, 14, 15, 17, 19-28
Inventive step (IS)	Yes: Claims 8, 11, 16, 18, 29, 30
	No: Claims 1, 4-7, 12-15, 17, 19-28
Industrial applicability (IA)	Yes: Claims 1, 4-8, 11-30
	No: Claims

2. Citations and explanations
see separate sheet

VII. Certain defects in the international application

The following defects in the form or contents of the international application have been noted:
see separate sheet

VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:
see separate sheet

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/GB00/03195

Reference is made to the following documents:

- D1: US-A-3,718,342
- D2: US-A-2,412,697

SECTION III:

1. No examination of **claims 2, 3, 9 and 10** with respect to Articles 33(1)-(4) PCT could be carried out for the clarity reasons as mentioned in SECTION VIII below.

SECTION V:

1. Concerning claim 1:

- 1.1 As far as claim 1 can be understood (see Section VIII, Point 1.), document D1 (see especially Figure 1) is considered as being the closest prior art to the subject-matter of claim 1 and shows an

Apparatus for moving a container (12, 19, etc.), the apparatus comprising a frame (30), the frame comprising a handle section (32), the frame being arrangable, in use, to be secured to the container such that the container can rotate relative to the frame and the container can be rolled along a surface, movement of the container being controllable (see Section VIII, Point 1.) by the handle section (32).

In this connection it should be borne in mind, that the apparatus according to claim 1 does not include the container (see Section VIII, Point 1., first paragraph). It does therefore do not make any difference if the apparatus as shown is moving a container or a kind of cage as shown in D1. The apparatus is suitable to move a container.

- 1.2 The subject-matter of **claim 1** is therefore not new (Article 33(2) PCT).

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/GB00/03195

1.3 Additionally, also when starting from document D2 the subject-matter of **claim 1** would not be new (Article 33(2) PCT).

2. Concerning claim 21:

2.1 Document D1 (see especially Figure 1) is considered as being the closest prior art to the subject-matter of claim 21 and shows

A method of moving a container, the method comprising the steps of fixing a frame (30) to a container (12, 19, etc.) such that the container can rotate relative to the frame and of moving the frame such that the container rotates relative to the frame and the container rolls along a surface.

In this connection it should be borne in mind, that the word "container" does not mean that the container has to be closed. The "cage" (12, 19, etc) of D1 can therefore also be regarded as being a container of open construction.

2.2 The subject-matter of **claim 21** is therefore not new (Article 33(2) PCT).

2.3 Additionally, also when starting from document D2 the subject-matter of **claim 21** would not be new (Article 33(2) PCT).

3. Concerning the dependent claims:

3.1 D1 also shows an apparatus according to the additional features of claims 4, 5, 6, 7 (clamping members 17), 14, 15 (reinforcement member 32), 17, 19 (adjustment by flexibility of part 32) and 20.

3.2 D1 also shows a method according to the additional features of claims 22, 23, 24, 25 (clamping between parts 17), 26, 27 and 28 (many positions of pins 17 are possible).

3.3 The subject-matter of **claims 4-7, 14, 15, 17, 19, 20 and 22-28** is therefore not new (Article 33(2) PCT).

3.4 In claims 12 and 13 a slight constructional change in the apparatus of claim 1 is defined which comes within the scope of the customary practice followed by persons skilled in the art, especially as the advantages thus achieved can readily be foreseen. Consequently, the subject-matter of **claims 12 and 13** lacks an inventive step (Article 33(3) PCT).

4. The industrial applicability is given for all claims (Article 33(4) PCT).

SECTION VII:

1. Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in the documents D1 and D2 is not mentioned in the description, nor are these documents identified therein.
2. Independent claims 1 and 21 are not in the two-part form in accordance with Rule 6.3(b) PCT, which in the present case would be appropriate, with those features known in combination from the prior art (D1) being placed in a preamble (Rule 6.3(b)(i) PCT) and with the remaining features being included in a characterising part (Rule 6.3(b)(ii) PCT).
- 3.1 The features of the "adjustment means" in claim 19 and of the "clamp" in claim 30 are not provided with reference signs placed in parentheses (Rule 6.2(b) PCT).
- 3.2 The reference sign (10) for the container in claim 27 is not in accordance with the rest of the description which gives this part the reference sign (32) - Rule 6.2(b) PCT.

SECTION VIII:

1. Current claim 1 is directed to an "Apparatus for moving a container". The words "for moving a container" must be construed as meaning merely "Apparatus suitable for moving a container" (see also the PCT-Guidelines, III-4.8). The apparatus according to claim 1 does therefore not include the container.

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/GB00/03195

Nevertheless claim 1 and the dependent claims 2, 3, 4, 5, 6, 9, 10 and 11 define the invention by reference to the container which results in a lack of clarity of the claims (Article 6 PCT and the PCT-Guidelines, III-4.8a).

2. A lack of clarity (Article 6 PCT) arises for claim 20 for the following reason:

Claim 20 is directed to "An assembly comprising apparatus for moving a container...". According to claim 20 the "apparatus is secured to a container". Due to this wording it is not clear

- a) if this container is the same container as the container which is being moved by the apparatus, and
- b) if the assembly comprises also said container.

- 3. The content of other documents is "incorporated herein by reference" in the description (page 17, line 9). However, a patent specification should be self-contained, i.e. capable of being understood without reference to other documents. Additionally, this incorporation is not essential for carrying out the invention (Article 5 PCT and the PCT-Guidelines C-II, 4.17 and 4.18).
- 4. The imprecise statement in the description on page 17 (lines 11-32) implies that the subject-matter for which protection is sought may be different to that defined by the claims, thereby resulting in lack of clarity (Article 6 PCT) when used to interpret them (see also the PCT Guidelines, III-4.3a).

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference NAJ/JRT/S600	FOR FURTHER ACTION see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. PCT/GB 00/ 03195	International filing date (day/month/year) 18/08/2000	(Earliest) Priority Date (day/month/year) 18/08/1999
Applicant GEE, Graham		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 2 sheets.

It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :

contained in the international application in written form.

filed together with the international application in computer readable form.

furnished subsequently to this Authority in written form.

furnished subsequently to this Authority in computer readable form.

the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. **Certain claims were found unsearchable** (See Box I).

3. **Unity of invention is lacking** (see Box II).

4. With regard to the **title**,

the text is approved as submitted by the applicant.

the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

the text is approved as submitted by the applicant.

the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.

as suggested by the applicant.

because the applicant failed to suggest a figure.

because this figure better characterizes the invention.

3

None of the figures.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 00/03195

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 B62B1/26

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 B62B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 3 718 342 A (FREED R) 27 February 1973 (1973-02-27) the whole document ---	1-7, 9, 10, 12-15, 17, 20-28
X	US 2 412 697 A (S. SOCHACZEWSKI) 17 December 1946 (1946-12-17) the whole document ---	1-7, 9, 10, 12-15, 17, 20-28
A	FR 995 125 A (M. RAOUL ROBERT) 30 November 1951 (1951-11-30) the whole document -----	1-30



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

° Special categories of cited documents :

- °A° document defining the general state of the art which is not considered to be of particular relevance
- °E° earlier document but published on or after the international filing date
- °L° document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- °O° document referring to an oral disclosure, use, exhibition or other means
- °P° document published prior to the international filing date but later than the priority date claimed

- °T° later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- °X° document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- °Y° document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- °&° document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
16 November 2000	29/11/2000
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Authorized officer Wochinz, R

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/GB 00/03195

Patent document cited in search report	Publication date	Patent family member(s)		Publication date
US 3718342	A 27-02-1973	NONE		
US 2412697	A 17-12-1946	GB	567121	A
FR 995125	A 30-11-1951	NONE		

PATENT COOPERATION TREATY

PCT
NOTIFICATION OF ELECTION
 (PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Commissioner
 US Department of Commerce
 United States Patent and Trademark
 Office, PCT
 2011 South Clark Place Room
 CP2/5C24
 Arlington, VA 22202
 ETATS-UNIS D'AMERIQUE

in its capacity as elected Office

Date of mailing (day/month/year) 26 April 2001 (26.04.01)	To: Commissioner US Department of Commerce United States Patent and Trademark Office, PCT 2011 South Clark Place Room CP2/5C24 Arlington, VA 22202 ETATS-UNIS D'AMERIQUE in its capacity as elected Office
International application No. PCT/GB00/03195	Applicant's or agent's file reference NAJ/JRT/S600
International filing date (day/month/year) 18 August 2000 (18.08.00)	Priority date (day/month/year) 18 August 1999 (18.08.99)
Applicant GEE, Graham	

1. The designated Office is hereby notified of its election made:

 in the demand filed with the International Preliminary Examining Authority on:

08 March 2001 (08.03.01)

 in a notice effecting later election filed with the International Bureau on:2. The election was was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740.14.35	Authorized officer Olivia TEFY Telephone No.: (41-22) 338.83.38
---	---